

REMARKS/ARGUMENTS

Claims 1-10 are pending in this application.

Claims 1, 6-10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) (spec. pages 1-4, lines 12-36 and figures 4 and 5) in view of Matsuura (U.S. 6,131,023). Claim 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Matsuura, and further in view of Shaw (U.S. 5,953,043). Claim 2 was rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Matsuura, and further in view of Sugiura et al. (US 2001/0022002). Claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Matsuura and Sugiura et al., and further in view of Blumlein et al. (U.S. 2,263,376). Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Matsuura and Sugiura et al., and further in view of Shaw. Applicant respectfully traverses the rejections of Claims 1-10.

Claim 1 recites:

A CATV tuner, comprising:
an input circuit connected to an input terminal for transmitting and receiving a signal to and from a CATV station, the input circuit including an upstream-signal input terminal, a distributor, a low-pass filter, an amplifier, and a downstream-signal output terminal;
a first mixer circuit for mixing an output signal from the input circuit and a first local-oscillation signal so as to generate a first IF signal;
a first oscillation circuit for transmitting the first local-oscillation signal to the first mixer circuit;
a first IF circuit for processing the first IF signal;
a second mixer circuit for mixing an output signal from the first IF circuit and a second local-oscillation signal so as to generate a second IF signal; and
a second oscillation circuit for transmitting the second local-oscillation signal to the second mixer circuit; and
a second IF circuit for processing the second IF signal;
wherein **at least one upstream signal is input to the upstream-signal input terminal so as to be transmitted to the CATV station, the distributor distributes a reception signal to generate distributed signals and transmits one of the distributed signals to the**

downstream-signal output terminal as a downstream signal so that the downstream signal is output therefrom, and the amplifier is arranged between the distributor and the downstream-signal output terminal so as to amplify the downstream signal, and the low-pass filter is arranged between the distributor and the amplifier so as to remove a CATV signal having a frequency that is higher than a predetermined upper limit frequency of the downstream signal.
(emphasis added)

With the unique combination and arrangement of features recited in Applicant's Claim 1, including the features of "at least one upstream signal is input to the upstream-signal input terminal so as to be transmitted to the CATV station, the distributor distributes a reception signal to generate distributed signals and transmits one of the distributed signals to the downstream-signal output terminal as a downstream signal so that the downstream signal is output therefrom, and the amplifier is arranged between the distributor and the downstream-signal output terminal so as to amplify the downstream signal, and the low-pass filter is arranged between the distributor and the amplifier so as to remove a CATV signal having a frequency that is higher than a predetermined upper limit frequency of the downstream signal," Applicant has been able to provide a CATV tuner that prevents noise, that prevents an upstream signal from flowing into a downstream side, and that reduces distortion of a downstream signal, the distortion being generated by a CATV signal (see, for example, the first full paragraph on page 4 of the originally filed specification).

The Examiner alleged that AAPA teaches all of the features recited in Applicant's Claim 1, except for the features of the amplifier being arranged between the distributor and the downstream-signal output terminal so as to amplify the downstream signal, and the low-pass filter being arranged between the distributor and the amplifier so as to remove a CATV signal having a frequency that is higher than a predetermined upper limit frequency of the downstream signal.

The Examiner further alleged that Matsuura teaches "the amplifier arranged between the distributor and the downstream-signal output terminal (fig. 1 elements 35,

46 and 52), so as to amplify the downstream signal (paragraph 8 lines 40-44), and the low-pass filter is arranged between the distributor and the amplifier (fig. 1 elements 46, 51 and 52) so as to remove a CATV signal having a frequency that is higher than a predetermined upper limit frequency of the downstream signal (element 51 is capable of removing unwanted frequencies, see paragraph 8 lines 34-36)."

Thus, the Examiner concluded that it would have been obvious to incorporate the low-pass filter and amplifier arrangement described by Matsuura within the device described in AAPA. Applicant respectfully disagrees.

Elements 46, 51, and 52 of Matsuura et al., which the Examiner alleged correspond to the distributor, low-pass filter, and amplifier, respectively, recited in Applicant's Claim 1, are completely different from the distributor, low-pass filter and amplifier recited in Applicant's Claim 1 and completely different from the distributor and amplifier taught by AAPA. Thus, contrary to the Examiner's allegations, one of ordinary skill in the art would not have been motivated to merely incorporate the low-pass filter and amplifier arrangement described in Matsuura in the device taught by AAPA.

First, the distributor 46, low-pass filter 51, and the amplifier 52 of Matsuura are provided after the RF signal is converted to an IF signal, whereas in the present invention, the distributor 34, the low-pass filter 36 and the amplifier 38 are provided before the first mixer, such that the distribution, filtering, and amplification are performed before the RF signal is converted to an IF signal. Thus, the distributor, low-pass filter, and amplifier of Matsuura perform completely different functions from the distributor, low-pass filter, and amplifier of the present invention. Matsuura fails to teach or suggest that the distributor 46, the low-pass filter 51, and the amplifier 52 could or should be used to perform any other function other than to process IF signals, and certainly fails to teach or suggest that these elements could be used to process RF signals before they are converted to IF signals.

Second, the circuit of Matsuura is configured to output an IF signal from the output terminal 15 when the signal is an analog signal and to output a baseband signal

from the output terminal 35 when the signal is a digital signal (see, for example, col. 8, lines 16-21). That is, the low-pass filter 51 and the amplifier 52 are configured to output **only digital baseband signals** from the output terminal 35. In contrast, the low-pass filter 36, and the amplifier 38 recited in Applicant's Claim 1 are configured to distribute the downstream signal before the first mixer, i.e., to distribute analog RF signals. Matsuura fails to teach or suggest that the low-pass filter 51 and the amplifier 52 could or should be used to output analog signals.

Thus, although Matsuura teaches a distributor, a low-pass filter, and an amplifier, (1) these elements are configured to perform completely different functions from the distributor, low-pass filter, and amplifier recited in Applicant's Claim 1 or the distributor and amplifier taught by AAPA, and (2) the signals being processed by the distributor, low-pass filter, and amplifier of Matsuura (i.e., IF digital baseband signals) are completely different from the signals being processed by the distributor, low-pass filter, and amplifier of the present invention (i.e., analog signals prior to being mixed by the first mixer). Thus, Applicant respectfully submits that one of ordinary skill in the art would not have been motivated to combine the teachings of Matsuura with AAPA.

Since Matsuura fails to teach or suggest that the distributor, low-pass filter, and amplifier disclosed therein are even suitable for processing and outputting RF signals, Matsuura certainly fails to provide any teaching, suggestion, or incentive to support the combination of AAPA and Matsuura proposed by the Examiner.

The Examiner is reminded that obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. In re Geiger, 815 F.2d 686, 2 USPQ 1276, 1278 (Fed. Cir. 1987).

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 1 under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Matsuura.

The Examiner relied upon Shaw, Sugiura et al., and Blumlein et al. to allegedly cure various deficiencies of AAPA and Matsuura. However, Shaw, Sugiura et al., and Blumlein et al. clearly fail to teach or suggest the features of "at least one upstream signal is input to the upstream-signal input terminal so as to be transmitted to the CATV station, the distributor distributes a reception signal to generate distributed signals and transmits one of the distributed signals to the downstream-signal output terminal as a downstream signal so that the downstream signal is output therefrom, and the amplifier is arranged between the distributor and the downstream-signal output terminal so as to amplify the downstream signal, and the low-pass filter is arranged between the distributor and the amplifier so as to remove a CATV signal having a frequency that is higher than a predetermined upper limit frequency of the downstream signal" as recited in Applicant's Claim 1. Thus, Applicant respectfully submits that Shaw, Sugiura et al., and Blumlein et al. fail to cure the deficiencies of AAPA and Matsuura described above.

Accordingly, Applicant respectfully submits that AAPA, Matsuura, Shaw, Sugiura et al., and Blumlein et al., applied alone or in combination, fail to teach or suggest the unique combination and arrangement of features recited in Applicant's Claim 1.

In view of the foregoing remarks, Applicant respectfully submits that Claim 1 is allowable. Claims 2-10 depend upon Claim 1, and are therefore allowable for at least the reasons that Claim 1 is allowable.

In view of the foregoing remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

Application No. 10/615,092
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Page 10 of 10

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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